

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-69 (Canceled).

Claim 70 (New): A method for detecting an endocrine disrupting substance, which in combination with an endocrine hormone produces an endocrine disruption, the method comprising:

(A) culturing a cell which is sensitive to the endocrine hormone in the presence of an endocrine hormone and a test substance, and detecting a gene expression pattern (1) of said cell;

(B) culturing said cell that is sensitive to the endocrine hormone in the presence of the endocrine hormone, but in the absence of the test substance, and detecting a gene expression pattern (2) of said cell;

(C) culturing said cell that is sensitive to the endocrine hormone in the absence of the endocrine hormone, but in the presence of the test substance, and detecting a gene expression pattern (3) of said cell;

comparing the gene expression pattern (1) with the gene expression patterns (2) and (3) to identify one or more unique gene expressions which is present in the gene expression pattern (1), but is absent in gene expression patterns (2) and/or (3),

wherein the presence of the at least one unique gene expression indicates that the test compound is an endocrine disrupting substance, and

wherein said cell has not been obtained by genetic engineering.

Claim 71 (New): The method according to Claim 70, wherein each of the gene expression patterns (1) to (3) is an electrophoretic pattern of transcribed RNAs recovered

from the corresponding cultured cell or an electrophoretic pattern of cDNAs corresponding to the transcribed RNAs.

Claim 72 (New): The method according to Claim 70, further comprising subtractive hybridization of the transcribed RNA or corresponding cDNA from (A) with complementary cDNA or complementary transcribed RNA from (B) and/or (C) prior to comparing the gene expression pattern (1) with gene expression patterns (2) and/or (3).

Claim 73 (New): The method according to Claim 70, further comprising:
(D) culturing said cell that is sensitive to the endocrine hormone in the absence of the endocrine hormone and in the absence of the test substance, and detecting a gene expression pattern (4) of said cell;
checking whether the unique gene expression in gene expression pattern (1) is present or absent in the gene expression pattern (4),
wherein the absence of the unique gene expression found in gene expression pattern (1) in the gene expression pattern (4) confirms that the test compound is an endocrine disrupting substance.

Claim 74 (New): The method according to Claim 73, wherein the gene expression patterns (1) and (4) are electrophoretic patterns of RNAs recovered from (A) and (D) or from an electrophoretic pattern of cDNAs corresponding to the RNAs recovered from (A) and (D).

Claim 75 (New): The method according to Claim 74, wherein subtractive hybridization of nucleic acids of (A) and (D) is conducted prior to the checking step involving the comparison of gene expression patterns (1) and (4).

Claim 76 (New): The method according to Claim 71, further comprising:

- (a) recovering RNAs from (A) to (C);
- (b) subjecting the RNAs recovered in step (a) to reverse transcription;
- (c) amplifying reverse transcription products obtained in step (b) by PCR; and
- (d) subjecting PCR products obtained in step (c) to electrophoresis, and
- (e) comparing the electrophoretic patterns of bands obtained from (A) and (B) and/or (C), thereby detecting one or more unique bands specific to the gene expression pattern (1) from (A).

Claim 77 (New): The method according to Claim 70, wherein each of the gene expression pattern (1) to (3) is determined by electrophoretically separating proteins or glycoproteins expressed in (A) to (C).

Claim 78 (New): The method according to Claim 77, wherein the proteins or glycoproteins expressed in (A) to (C) are electrophoretically separated using SDS-PAGE to determine the respective gene expression patterns.

Claim 79 (New): The method according to Claim 77, wherein the proteins or glycoproteins expressed in (A) to (C) are electrophoretically separated using two-dimensional electrophoresis to determine the respective gene expression patterns.

Claim 80 (New): The method according to Claim 70, wherein said cell is a germ cell or a nerve cell.

Claim 81 (New): The method according to Claim 70, wherein said cell is a normal cell.

Claim 82 (New): The method according to Claim 70, wherein said cell is a cancer cell.

Claim 83 (New): The method according to Claim 70, wherein said cell is a human cell.

Claim 84 (New): The method according to Claim 70, wherein said cell is a non-human cell.

Claim 85 (New): The method according to Claim 70, wherein said cell is selected from the group consisting of a murine neuroblastoma cell, a murine uterus carcinoma cell, a murine testicular Leydig cell, a cell derived from testicular Sertoli cells.

Claim 86 (New): The method according to Claim 70, wherein said cell is selected from the group consisting of Neuro2a MCF7, TM3, TM4, 15P-1 and S-20Y.

Claim 87 (New): The method according to Claim 70, wherein said endocrine hormone is selected from the group consisting of a female hormone, a male hormone, an adrenal cortex hormone, and an amino acid derivative hormone.

Claim 88 (New): The method according to Claim 70, wherein said hormone is selected from the group consisting of estrogen, estradiol, progesterone, androgen,

testosterone, androsterone, cortisol, aldosterone, corticosterone, cortisone, triiodothyronine (T3), Thyroxine (T4), and parathyroid hormone.